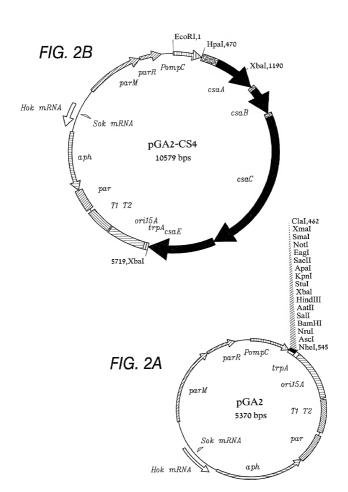


FIG. 1C



FIG. 1D

2000 4000 6000 8000 10000



CsaE CfaE CotD CooD TsaD Consensus	1 MINKILFIFT LFFSSVLFTF AVSADKIPGD ESITNIFOP RDRNESS P MNKILFIFT LFFSSGFFTF AVSADKIPGD ESITNIFOP RDRNESS P MNKILFIFT LFFSSGFFTF AVSADKNPGS ENMTNTIGP. HDRGGSS P MKKYIFFLS BHFLCSQVYGG SWITNIVEAGS INKTESIGP. IDISANAASY P MKKYIFFLS BIFSAVVSA GRYPETTVGN LTKSFQAPE. LDRSVQS P MSNICKKWTSM TAHWSAINF IRKYYYPARI LAIL IL4AGAT LFQVADAITV .nK. f .sa .fr .ag i .ag - ldraa .p
CsaE .CfaE CotD CooD TsaD Consensus	51 KINILINHIT A YSESH TLYDRMT FL CLSSHNTLNG ACPTSENPSS IYNILISYLT A YNGSH HLYDRMS FL CLSSQNTLNG ACPSSDAPOT AHYTHEBUA G YNKDH SLEPRAT FL CARSTDASKA ACPTGENSKS IYNIETHIYA G YSLSH SLYDRIV FL CTSSSNPVNG ACPTIGTSGV DLNYDKINVA VITPVWSQEW SVANVLGGWY CRSNRNENEG CEETHLVWW
101 CsaE CfaE CotD CooD TsaD. Consensus	SYSGETNIT LQFTEKRSLI KRELQIKGYK QLLFKSVNCPSGLTLNS ATIDGETNIT LQFTEKRSLI KRELQIKGYK QFLFKNANCpSKLALNS SQGETNIK LIFTEKKSLA RKTLNLKGYK RFLYESDKCI HYVDKMILNS Q.YGTTITI LQFTEKRSLI KRNINAGNK FRIVENGSC. DFSMINVLNS YAFOAYSXIR LRFREQISHA ETITLILGSV R DAC. TGVTNANA _gLL_LFEERSULGKr
151 CsaE CfaE CotD CooD TsaD Consensus	AHFNONKNA. ASOASLYLYI PAGELKNLPF GGIWDATLKL EVKRR VS SHFQCNREQ. ASOATLSLYI PAGELKNLPF GGIWDATLKL EVKRR Y HTVKCVOSF. TROVPTILYI PQGEIOOLLT GGIWGATLEL RYKRRI. YD KSWSCGA HON ANGTILKI IY PAGEINKLPF GGIWEATLLI RLSRYGEVSS AACQW GREIKLRI PSEELAKIFI STYKATILVI. DYLQWG. GD
201 CsaE CfaE CotD CooD TsaD Consensus	ETYGTYTINI TIKLTDK- G NIQIWLPQF- KSDARVDI.NI. RPTGGGTYIG TTYGTYTINI TVNLTDK. G NIQIWLPQF- KSNARVDI.NI. RPTGGGTYIG TYNIGTYKNI TVNLTDK. G NIQIWLPQF- KSNARVDI.NI. RPTGGGTYIG VNHGTYKVNI TVDLTDK. G NIQVWTYRF- HISDPRIDI.NI. RPEGONKYSG THYGSYTVNI TVDLTDK. G NIQVWLPGF- HISPRYVDI.NI. RPIGNYKYSG DPLGTSTTDI TLAVTDHFAB NAATYFPQFG TATPRVDLNI. HRNNASQMSG GDy#1 TV. TIDLE, Sliqiw-PgF- SPRDI.NI. Pg-, 376
251 CsaE CfaE CotD CooD TsaD Consensus	RNSVDMCEYD RNSVDMCEYD SYLEMENTY SYLEMENTY SYLEMENTY SYLEMENTY SYLEMENTY SYLEMENTY RANLDMCLYD RANLDMCLYD RANLDMCLYD ROYSTMSSEL BREQDDNSKS DGKFYLKKIN DDIKELVYTL GYSTMSSEL BREQDDSORD ONEFUNERCE EPLKLIFYKL GYSTMSDSMY IKFQDDNETN SSEYNLYKIG G TEKLIFYAV GYSTMSDSMY IKFQDNETN SSEYNLYKIG G TEKLIFYAV GYSTMSDSMY IKFQDDNETN SSEYNLYKIG G TEKLIFYAV GYSTMSDSMY IKFQDNETN SSEYNLYKIG G TEKLIFYAV GYSTMSDSMY IKFGDNETN SSEYNLYKIG G TEKLIFYAV GYSTMSDSMY IKFGDNETN SSEYNLYKIG GYSTMSDSMY IKFGDNETN SSEYNLYKIG GYSTMSDSMY
301 CsaE CfaE CotD CooD TsaD Consensus	SLILAGYSLT PTNGTSINIA DAASLETNWN RITAVTMPEI SVPVLCWPGR SLLLAGKNLT PTNGQALNI NTASLETNWN RITAVTMPEI SVPVLCWPGR SLLLAGKNLT PTNGQALNI NTASLETNWN RITAVTMPEI SVPVLCWPGR SLLLAGGREFY PNNGKAFTIN DTSSLETNWN RIVAVAMPEI NVPVLCWPAN SLIHAGERIEY PVNGQSFTIN DISSVLETNWN RVTAVAMPEV NVPVLCWPAR SMYYGGRSP VTRGVERSLD NVDKAATR. JPVLFGQ RQAVRCVPVP SSLEGZ
351 CsaE CfaE CotD CooD TsaD Consensus	LQLDAK V ENPEAGQYMG NINVTFTPSS LQLDAK V KNPEAGQYMG NIKITFTPSS LTPMSE L NNPEAGGYSG LLNVTFTPSS LLLNAD V NAPPAGQYSG GINTFTPSS LLLLNAD V NAPPAGQYSG GINTFTPSS LLLLNAD V NAPPAGQYSG GINTFTPSS LLLLNAD V NAPPAGQYSG GINTFTPSS LLLLNAD V nappagygotirthys. qu  QT LLLLNAD V nappagygotirthys. qu  QT LLLLNAD V nappagygotirthys. qu

MKFKKTIGAM ALTTMFVAVS ASAVEKNITV TASVDPAIDL LQADGNALPS VKLAYSPAS CfaA MKLKKTIGAM ALATLFATMG ASAVEKTISV TASVDPTVDL LQSDGSALPN VALTYSPAV CooA MKLNKIIGAL VLSSTFVSMG ASAAEKNITV TASVDPTIDL MQSDGTALPS AVNIAYLPGE CotA MKLKYTIGAM ALSTIFVAVS ASAVEKNITV TASVDPTIDI,LQANGSALPT AVDLTYLPGA CsuAl CsuA2 VDPTIDI LQANGSALPT AVDLTYLPGA VDPKLDL LQADGTSLPD SIALTYSSAS CsdA VDPKLDL LQADGTSLPD SIALTYSSAS CsbA mk..k.iga...1 ... f .... asa.ek.i.v tasVDPtiDl \$Qa#GtaLP. al.ltYspa. Consensus 61 SRFENYKIAT KVHTNVINKN VLVKLVNDPK -LTNVLDSTK QLPITVSYGG K-LSTADVTF CsaB KIFESYRVMT QVHTNDATKK VIVKLADTPQ -LTDV.LNSTV QMPISVSWGG VLSTTAKEF CfaA NNFEAHTINT VVHTNDSDKG VVVKLSADPV -LSNVLNPTL QIPVSVNFAG KPLSTTGITI CooA KRFESARINT QVHTNNKTKG IQIKLTNDNV VMTNLSDPSK TIPLEVSFAG TKLSTAATSI CotA KTFENYSVLT QIYTNDPSKG LDVRLVDTPK -LTNILQPTS TIPLTVSWAG RTLSTSAQKI CsuA1 KTFENYSVLT QIYTNDPSKG LDVRLVDTPK -LTNILQPTS TIPLTVSWAG KTLSTSAQKI CsuA2 NNFEVYSLNT AIHTNDKTKA VVVKLSAPAV -LSNIMKPSS QIPMKVTLGG KTLSTADAEF CsdA NNFEVYSLNT AIHTNDKSKG VVVKLSASPV -LSNIMXPNS QIPMKVTLGG ETLNTTDTEF CsbA ..FE.ys.nT .!hTN#k.Kg v.!kL...pv .\$tNi..p.s qiP..Vs.gG tLsT .... f, Consensus 179 121 CsaB EPAELNFGTS GVTGVSSSQD LVIGA----T TAQAPSA-NY SGVVSILMTL AS EAAALGYSAS GVNGVSSSQE LVISA-APKT AGTAPTAGNY SGVVSLVMTL GS CfaA DSNDLNFASS GVNYVSSTQK LSIHADATRV TGGALTAGQY QGLVSIILTK ST CooA TADQLNFGAA GVETVSATKE LVINAGSTQQ TN--IVAGNY QGLVSIVLTQ EP CotA CSUAI AVGDLGFGST GTAGVSNSKE LVIGA---TT SGK-PSAGKY QGVVSIVMTQ STN CsuA2 AVGDLGFGST GTAGVSNSKE LVIGA---TT SGTAPSAGKY QGVVSIVMTQ STDTAAPVP CsdA AADTLNFGAS GVENVSSVQQ LTIHA --- EA --- APPEAGNY QGVISLIMTQ KT CSbA TVDTLNFGTS GVENVSSTQQ LTIHA --- DT QGTAPEAGNY QGIISLIMTQ KT g.ap.AGnY qGv!Si!\$Tq Consensus-.d.LnFg.s Gve.VSs.q. LvI.A .... t

CsaB

MKLKKTIGAM ALTTMFVAMS ASAVEKNITV TASVDPTIDI LQADGSSLPT AVELTYSPAA

Multalin (version 5.4. 1). Consensus symbols: ! is anyone of IV; S is anyone of LM; % is anyone of FY; # is anyone of NDOEBZ

60